

# IDAHO'S NEWEST TECHNOLOGY SECTOR: THE BIOSCIENCES

By Julie Howard

One of Idaho's oldest industries is merging with one of its newest to create a burgeoning new sector – the biosciences.

This growing area in the state – a blend of agriculture and technology, with a dose of health-care – includes everything from cancer research, to new seed crop development, to electronics used in implantable medical devices.

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“People inside and outside of the state might be surprised to know that Idaho is a leader in several niche areas of the biosciences,” said Karl Tueller, executive director of the state Office of Science & Technology. “We need to leverage these strengths to create more opportunities for industry and jobs.”

Mike Laskowski, a University of Idaho research professor who leads a \$16 million statewide biomedical grant program, said efforts at promoting the state's biosciences will reap huge benefits.

“We did a self-assessment and identified our strengths,” said Laskowski. “And once you identify your strengths, you can start building on them.”

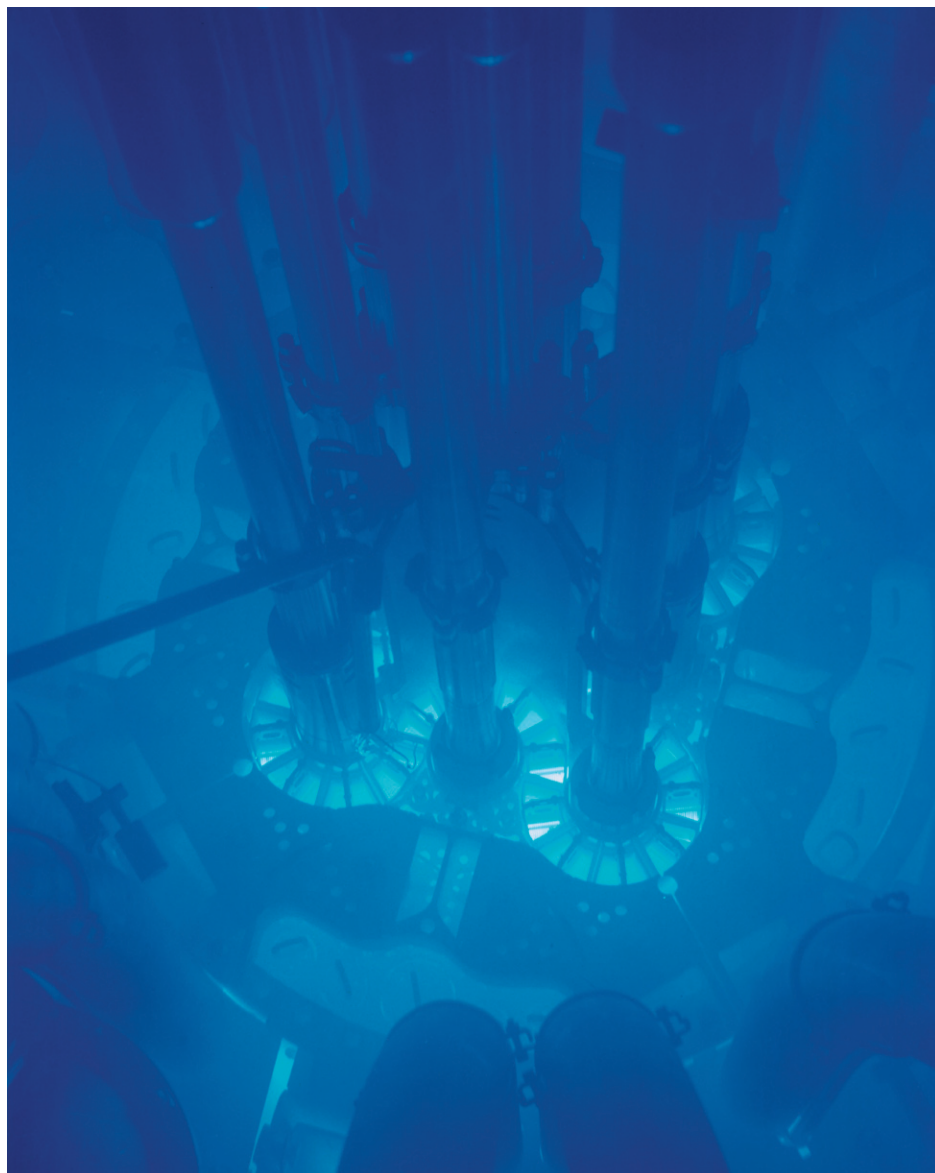
Idaho's strengths – which bridge across research institutions and industry – were identified as: infectious diseases in plants, animals and humans; bioproducts and biofuels; and environmental remediation and environmental sustainability.

The sector includes such companies as Sapi-dyne Instruments, a Boise firm that makes medical testing instruments; the Idaho National Lab, which is developing new fuels using plant waste from harvested crops; and Micron Technology, which makes tiny camera chips in pill form that can take pictures of a patient's GI tract. (See sidebar below for more examples of Idaho's work in the biosciences)

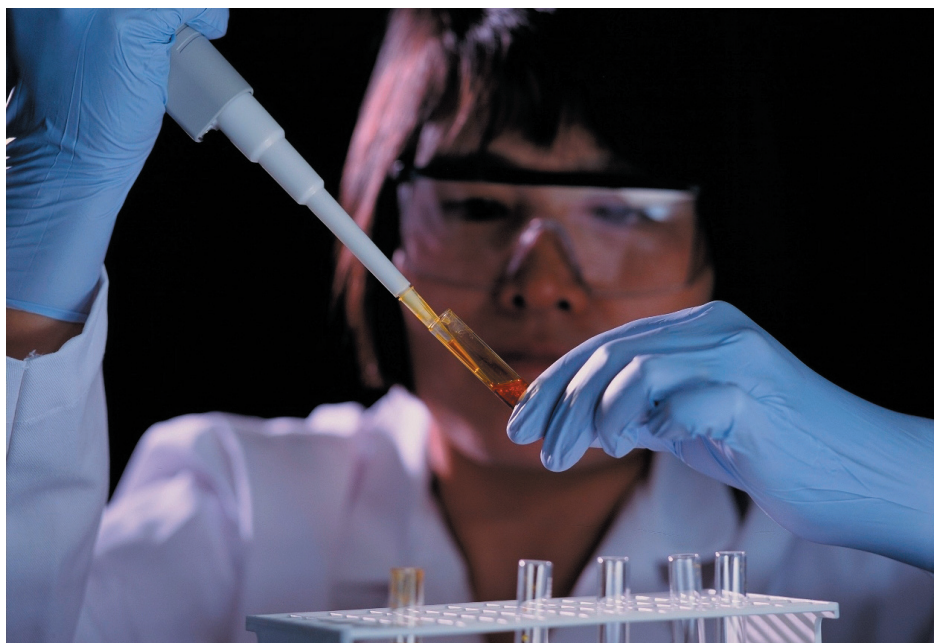
While work in the biosciences here has been developing for decades, the state's focus and emphasis on this area is relatively new.

Just two years ago, the Idaho Biosciences Association was formed. Last year, Laskowski's program – the IDeA Network for Biomedical Excellence – was established. Earlier this year, the state named the biosciences as one of its core competencies and called for a stronger focus in education, research, and economic development in this area.

In June, Idaho State University announced the establishment of a Biomedical Research Institute, and the state held its first-ever Idaho Pavilion at the worldwide Biotechnology Industry Organization show in Philadelphia.



The Idaho National Lab's Advanced Test Reactor is also used for production of important isotopes used in medicine, research and industry. Photo courtesy of INL



A senior scientist at Alturas Analytics in Moscow, Idaho prepares samples for analysis by High Performance Liquid Chromatography/Mass Spectrometry/Mass Spectrometry. Photo courtesy of Alturas Analytics

Then, in July, a state legislative task force was convened to study ways Idaho can support its biosciences industry and research institutions.

Phil Syrdal, president of the Idaho Biosciences Association, sees a tremendous future for the biosciences in Idaho.

"My hope is that the brightest people in the country and the brightest students in Idaho will find a way to be part of this state," said Syrdal, about his organization's mission to grow the industry. "The state will gain by retaining its best and brightest."

The Biosciences Association, known as BioIdaho, was formed to bring together industry, research institutions, and government in growing the state's biotechnology sector. In the organization's first year, it focused on education and building partnerships among government, university, and industry groups. Now, organizers are working on developing funding that supports industry and educational needs of this sector.

"The (legislative) task force needs to clearly identify the means for Idaho to develop its science-based industry," said Syrdal. "We're hoping that the task force will be able to look at specific forms of legislation that will provide catalysts for growth."

Marketing Idaho as a biosciences state helps current industry recruit new employees, who might otherwise be concerned about moving to a state with too small an industry cluster. "It can be difficult to attract people, but once we get them here, we have very low turnover," said Shane Needham, lab director and co-founder of

Alturas Analytics, a pharmaceutical and environmental testing lab in Moscow. "We find this is a great place to do business. It's inexpensive, so we can be more competitive in our prices compared to if we were in Seattle, San Francisco, or Maryland."

Building university doctorate programs in the biosciences is the next step, so that firms can recruit from inside the state, said David Smith, sales and marketing manager for Sapidyne Instruments in Boise.

"The area lacking has been in higher level education in the biological sciences," said Smith. "Now Boise State University is working toward developing a Ph.D. level program in biosciences, so we're very excited about that. We hire Ph.D. level scientists, and we've had to look for them around the world."

Building an industry that provides good jobs for the future is the ultimate goal of Laskowski.

"It basically comes down to creating good-paying jobs for my grandkids in Idaho, so they don't have to leave the state," said Laskowski. "This is the golden age of biotechnology, and we have a great opportunity here. But this can't happen without the state stepping up and investing in its universities and businesses."

The state's Tueller agrees. "There's so much potential here, but developing this industry doesn't come easy," said Tueller, who heads Idaho's efforts to build its technology sectors. "This needs to be a sustainable effort, and we need to put some resources into this sector." **IQ**

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#### OTHER EXAMPLES OF IDAHO'S BIOSCIENCES:

- **O.D.260 Inc.** makes cloning systems for adenoviruses for use in research and pharmaceutical development. The firm is based in Boise.
- **Greg Bohach**, a professor at University of Idaho, is considered a worldwide expert in how potentially deadly staph infections affect human cells. He leads a \$10 million program funded by the National Institutes of Health that support research into infectious disease.
- **The Good Cow Company**, based in Meridian, uses patented USDA technology to concentrate milk, creating a raw product that has a shelf-life twice as long as traditional milk.
- **AMI Semiconductor**, a worldwide firm with headquarters in Pocatello, is the fourth largest company in the world in industrial/medical ASICs, or applied specific integrated circuits. Its electronic chips go in everything from pacemakers to hearing aids.
- **Beckmer Products** in Meridian has a patented foot-operated computer mouse for dental offices. The new company has its product – called the Dental R.A.T. – in Idaho State University's dental hygiene labs and students are required to train on the new technology.